COOH (SEQ ID NO. 3)

β5 subunit: NH-E-M-A-S-N-P-L-Y(PO_3)-R-K-P-I-S-T-H-T-V-D-F-T-F-N-K-F-N-K-S-Y(PO_3)-N-G-T-V-D-COOH (SEQ ID NO. 4)

β6 subunit: NH-Q-T-G-T-N-P-L-Y(PO_3)-R-G-S-T-S-T-F-K-N-V-T-Y(PO_3)-K-H-R-E-K-Q-K-V-D-L-S-T-D-C-COOH (SEQ ID NO. 5) or

NH-Q-T-G-T-N-P-L-Y(PO_3)-R-G-S-T-S-T-F-K-N-V-T-Y(PO3)-K-H-R-COOH (SEQ ID NO. 6)

β7 subunit: NH-D-R-R-E-Y-(PO_3)-S-R-F-E-K-E-Q-Q-Q-L-N-W-K-Q-D-S-N-P-L-Y(PO_3)-K-S-A-I-COOH (SEQ ID NO. 7).--

Please replace the paragraph beginning at page 19, line 18, with the following rewritten paragraph:

--Any integrin which contains a phosphorylated tyrosine in the cytoplasmic domain of the β subunit can be used for identifying and isolating an integrin cytoplasmic signaling partner. These particularly include the β1, β2, β3, β5, β6, β7 and β8 subunits, but other β subunits are contemplated. These particularly exclude β subunits in which the phosphorylated tyrosine is followed by an isoleucine or leucine in an ITAM motif (YXXI/L) (SEQ ID NO. 8).--

Please replace the paragraph beginning at page 42, line 15 through page 43, line 6, with the following rewritten paragraph:

--In light of our discovery, the following observations are relevant. The NPLY sequence (SEQ ID NO. 26) encompassing residues 744-747 of GPIIIa is homologous to the NPXY motif (SEQ ID NO. 27) which, when phosphorylated on tyrosine, is known to bind proteins with the phosphotyrosine-binding (PTB) domain such as SHC, IRS-1, and possibly pp140 kDa (Kavanaugh, W.M. *et al.*, *Science* (1994) 266:1862-1865; Gustafson, T.A. *et al.*, *Mol. Cell Biol.*

(1995) 15:2500-2508). There also exists an immune receptor tyrosine-based activation motif (ITAM; YXXL/IXXXXXXXXYXXL/I) (SEQ ID NO. 9) found on subunits of the T cell receptor, B cell receptor, and Fc receptor which are, when phosphorylated on both tyrosines, known to interact with signaling proteins (e.g., ZAP-70 in T cells or syk in B cells) (Chan, A.C. *et al.*, *Cell* (1992) 71:649-662; Hutchcroft, J.E. *et al.*, *J. Biol. Chem.* (1992) 267:8613-8619; Law, D.A. *et al.*, *Curr. Biol.* (1993) 3:645-657. It is noted that the sequence in the β3 subunit, although containing two tyrosine residues, lacks the L/I residues found in all ITAM domains. Therefore, the β3 cytoplasmic domain does not appear to contain an ITAM motif. However, the cytoplasmic domain of the β4 integrin, which does not bear homology to the other integrin β subunits, does contain an ITAM domain. Like other ITAMs, this domain has recently been shown to act in the recruitment of signaling molecules (Mainiero, F. *et al.*, *EMBO J.* (1995) 14:4470-4481). Accordingly, experimental protocols were developed to determine whether the tyrosine residues within the GPIIIa were also phosphorylated in response to stimuli which activate the GPIIb-IIIa integrin.--

Please replace the paragraph beginning at page 47, line 14, with the following rewritten paragraph:

--The discovery that the cytoplasmic domain of GPIIIa is phosphorylated at tyrosine residues during platelet aggregation was the first step in demonstrating that the phosphorylated cytoplasmic domain has functional activity in interacting with signaling proteins. A phosphorylated peptide corresponding residues 740-762 of GPIIIa was synthesized and coupled to biotin at the main terminus:

(Peptide 1) Biotin-D-T-A-N-N-P-L-Y(PO_3)-K-E-A-T-S-T-F-T-N-I-T-Y(PO_3)-R-G-T-COOH (SEQ ID NO. 3).--

Please replace the paragraph beginning at page 47, line 23, with the following rewritten paragraph:

--A control peptide was synthesized with an identical sequence, but unphosphorylated:

(Peptide 2) Biotin-D-T-A-N-N-P-L-Y-K-E-A-T-S-T-F-T-N-I-T-Y-R-G-T-COOH (SEQ ID NO. 10).--

Please replace the paragraph beginning at page 52, line 3, with the following rewritten paragraph:

--The following peptides are used to demonstrate the binding of signaling partners to integrins containing a phosphorylated β1 subunit:

(peptide 1) biotin-D-T-G-E-N-P-I-Y(PO_3)-K-S-A-V-T-T-V-V-N-P-K-Y(PO_3)-E-G-K-COOH (SEQ ID NO. 1)

and the unphosphorylated control peptide

(peptide 2): biotin-D-T-G-E-N-P-I-Y-K-S-A-V-T-T-V-V-N-P-K-Y-E-G-K-COOH (SEQ ID NO. 11).--

Please replace the paragraph beginning at page 54, line 23 through page 55, line 7, with the following rewritten paragraph:

--The following peptides are used to demonstrate the binding of signaling partners to integrins containing a phosphorylated β5 subunit:

(peptide 1) biotin-E-M-A-S-N-P-L-Y(PO_3)-R-K-P-I-S-T-H-T-V-D-F-T-F-N-K-F-N-K-S-Y(PO_3)-N-G-T-V-D-COOH (SEQ ID NO. 4)

and the unphosphorylated control peptide:

A7 Cont'd

(peptide 2) biotin-E-M-A-S-N-R-L-Y-R-K-P-I-S-T-H-T-V-D-F-T-F-N-K-F-N-K-S-Y-N-G-T-V-D-COOH (SEQ ID NO. 12).--

Please replace the paragraph beginning at page 57, line 8, with the following rewritten paragraph:

--The following peptides are used to demonstrate the binding of signaling partners to integrins containing a phosphorylated β6 subunit:

IN5 B8

A8

(peptide 1): biotin-Q-T-G-T-N-P-L-Y(PO_3)-R-G-S-T-S-T-F-K-N-V-T-Y(PO_3)-K-H-R-E-K-Q-K-V-D-L-S-T-D-C-COOH (SEQ ID NO. 5)

and the unphosphorylated control peptide:

(peptide 2): biotin-Q-T-G-T-N-P-L-Y-R-G-S-T-S-T-F-K-N-V-T-Y-K-H-R-E-K-Q-K-V-D-L-S-T-D-C-COOH (SEQ ID NO. 13).--

Please replace the paragraph beginning at page 57, line 19, with the following rewritten paragraph:

IN5 B9

A9

--Alternatively, a phosphorylated peptide missing the 11 carboxy terminal amino acids, which may have an influence on signaling through this integrin, can be used. This peptide is used to identify signaling proteins which do not recognize the entire cytoplasmic domain.

(peptide 3): biotin-Q-T-G-T-N-P-L-Y(PO_3)-R-G-S-T-S-T-F-K-N-V-T-Y(PO_3)-K-H-R-COOH (SEQ ID NO. 6).--

Please replace the paragraph beginning at page 60, line 14, with the following rewritten paragraph:

A10 IN5 B10

--The following peptides are used to demonstrate the binding of signaling partners to integrins containing a phosphorylated β2 subunit:

(peptide 1): biotin-D-L-R-E-Y(PO_3)-R-R-F-E-K-E-K-L-S-Q-W-N-N-D-N-P-L-F-K-S-A-T-COOH (SEQ ID NO. 2)

and the unphosphorylated control peptide:

biotin-D-L-R-E-Y-R-R-F-E-K-E-K-L-S-Q-W-N-N-D-N-P-L-F-K-S-A-T-COOH (SEQ ID NO. 14).--

Please replace the paragraph beginning at page 62, line 9, with the following rewritten paragraph:

--The following peptides are used to identify signaling proteins associated with the β7 cytoplasmic tail in a phospho-dependent manner. These peptides are used to precipitate proteins from suitable cell lysates (e.g., differentiated THP-1 cells as described above), and for cDNA library screening.

biotin-D-R-R-E-Y(PO_3)-S-R-F-E-K-E-Q-Q-Q-L-N-W-K-Q-D-S-N-P-L-Y(PO_3)-K-S-A-I-COOH (SEQ ID NO. 7)

and the unphosphorylated control peptide:

biotin-D-R-R-E-Y-S-R-F-E-K-E-Q-Q-Q-L-N-W-K-Q-D-S-N-P-L-Y-K-S-A-I-COOH (SEQ ID NO. 15).--